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(54) Title: USE OF QUASI-ONE-DIMENSIONAL TRANSITION METAL TERNARY COMPOUNDS AND QUASI-ONE-DIMENSIONAL TRANSITION METAL CHALCOGENIDE COMPOUNDS AS ELECTRON EMITTERS



(57) Abstract: The present invention pertains to the use of quasioe-dimensional transition metal ternary compounds $M_xH_yHa_z$ (where M is a transition metal Mo, W, Ta, Nb; H is sulfur (S), selenium (Se), tellurium (Te); Ha is iodine (I)) and of doped quasi-one-dimensional transition metal ternary compounds $M_xH_yHa_z$, (where M=Ta, Ti, Nb; H is sulfur (S), selenium (Se), tellurium (Te); Ha is iodine (I)) with elements of group Ib (silver (Ag), gold (Au), or copper (Cu)) as electron emitters under the influence of an external electric field. The percentage of quasi-one-dimensional transition metal ternary compounds and/or doped quasi-one-dimensional transition metal ternary compounds doped with elements of group Ib in the active

material ranges from 0.01 to 99.9 the rest consisting of additives in the form of conducting, non-conducting or semi-conducting compounds or composites. Electron emission takes place at a pressure below 1 mbar.